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EXAMINER

SHORTLEDGE, THOMAS E

ART UNIT PAPER NUMBER

2654

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/921,924

Applicant(s)

MATSUOKA ET AL.

Examiner

Thomas E. Shortledge

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 6-10, 12-17, 20, 23-25 and 27-31 is/are rejected.
- 7) ☒ Claim(s) 5, 11, 18, 19, 21, 22, 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/06/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This communication is in response to Remarks file 10/11/2005.
2. Claims 1, 2, and 4-31 are pending in the application. Claims 1, 14, 29 and 31 are independent claims. Claims 1, 2, 4-20, and 23-29 have been amended. Claims 30 and 31 have been added.
3. The objection to the Priority of the application has been withdrawn based on the user's arguments.
4. Objection to claims 1-29 have been withdrawn in view of the applicant's amendments.
5. The 35 U.S.C 112 rejections of claims 5, 9, 10, 11, 16, 18, 22-24 and 26 have been withdrawn in view of the applicant's amendments.

### ***Claim Objections***

6. Claim 13 is objected to because of the following informalities: the claim states<sup>e</sup><sub>λ</sub> it is dependent on claim 15, but the examiner believes the claims should be dependent on claim 12. Appropriate correction is required.

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7. Claims 5, 11, 18, 19, 21, 22 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 1, 2, 8-10, 14-16, 23-25, and 29-31 are rejected under 35 U.S.C. 102(a) as being anticipated by Ruch et al. (Medical Document Anonymization with a Semantic Lexicon).

As to claims 1, 14, 29 and 31, Ruch et al. teach:

a specificity calculating unit extracting an expression specifying a person from an input document and calculating specificity to evaluate a degree of intensity at which the expression can specify the person (determining to what extent an expression specifies the identity of a person within a document, page 3, col. 1, paragraphs 2-3);

an anonymity setting processing unit changing a name of the person in the input document having a specificity which is greater than a predetermined threshold (when an

expression can lead to the identity of a person, the expression is changed, page 3, col. 1, paragraphs 2-3, and page 5, Figure 2);

wherein said specificity calculating unit extracts surrounding expressions of the person's name from said input document (extracting surrounding expression to determine if a person can be identified, page 3, col. 1, paragraph 1), and calculates, for each surrounding expression, a degree of specificity for evaluating a degree of specificity at which the person can be specified with the extracted individual surrounding expressions (determining if the surrounding expression can be used to identify a person, and if it is determined it can be, the expression is changed, page 3, col. 1, paragraphs 2-3, and page 5, Figure 2);

said anonymity setting processing unit sets, when there is a surrounding expression of a degree of specificity higher than a predetermined threshold, anonymity for such surrounding expression and the person's name (if an extracted expression is found to be able to determine the identity of a person, both the person's name and the expression is made anonymous, page 3, col. 1, paragraphs 2-3, and page 5, Figure 2).

As to claims 2, 16 and 30, Ruch et al. teach:

wherein said specificity calculating unit extracts the surrounding expressions of the person's name from said input document, and calculates, for each combination of individual extracted surrounding expressions, the degree of specificity for evaluating the degree of intensity at which the person can be specified with a combination of the extracted individual surrounding expressions (extracting the patient's name along with

surrounding expression that may be used to determine the identity of the patient, for example names of patient's doctors and patient's date of birth, which can be used with the patient's name to determine the exact identity of the patient. If these expression are found to lead to the identity of the patient, the expressions and the name of the patient is changed, page 1, col. 2, paragraphs 2-3);

said anonymity setting processing unit sets, when there is a combination of surrounding expressions of the degree of specificity higher than a predetermined threshold, anonymity for the combination of surrounding expressions (If the surrounding expressions are found to lead to the identity of the patient, the expressions and the name of the patient is changed, page 1, col. 2, paragraphs 2-3).

As to claims 8 and 23, Ruch et al. teach the anonymity setting processing unit has a non-anonymity requiring database registering a non-anonymity requiring expression and a expression registered in the non-anonymity requiring database in an expression specifying the person extracted from an input document is not rewritten to an anonymity expression (extracting expressions, including expression that where not able to determine the identity of the person, these expression are not changed, page 1, col. 1, paragraph 2).

As to claims 9 and 24, Ruch et al. teach wherein the anonymity setting processing unit has an anonymity requiring database registering an expression to be rewritten to an anonymity expression and all expressions in the input document

registered in the anonymity requiring database are rewritten to the anonymity expression (any expression listed as needing to be replaced to make the expression anonymous, is rewritten to be anonymous, page 1, col. 1, paragraph 2).

As to claim 10, Ruch et al. teach the anonymity setting-processing unit rewrites an expression specifying the person extracted from the input document to have no meaning, (page 5, figure 2).

As to claim 15, Ruch et al. teach:

the specificity-calculating step extracts the person's name from the input document and calculates a specificity to evaluate the degree of intensity at which the person's name thus extracted can specify the person (extracting a name from the input, and determining if an identity can be extracted from the name, page 1, col. 2, and page 3, col. 1);

the anonymity setting processing step anonymity sets the person's name having a greater specificity than the predetermined threshold (any name that will identify the person is changed, page 1, col. 3, and page 3, col. 1).

As to claim 25, Ruch et al. teach the anonymity setting processing step replaces the expression which specifies the person extracted from the input document with a meaningless expression (any expression that is able to identify the patient is replaced

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with a series of X's, the expression could be a doctor's name or a date of birth, page 1, col. 2, paragraph 2).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4, 6-7, 17 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Ruch et al. as applied to claims 1 and 17 above, and further in view of Mani et al. (Identifying Unknown Proper Names in Newswire Text).

As to claims 4 and 17, Ruch et al. teach:

a sentence extracting means extracting a sentence from an input document  
(extracting sentences from an input, page 1, paragraph 2, col. 2);

a part-of-speech analyzing means decomposing the extracted sentence for each part of speech (a part-of-speech analyzing method, page 1, col. 2, paragraph 1);

a name extracting means extracting the person's name based on a person name extracting rule from a result of the part-of-speech analysis (extracting a person's name, page 1, col. 2, paragraph 1);



Ruch et al. do not teach a name specificity calculating means calculating a specificity of the name thus extracted based on statistical information.

However, Mani et al. teach calculating the confidence level of the name with information provided by various knowledge sources, (page 47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ruch et al. with the methods of Mani et al. since Ruch et al. teach database extraction, and Mani et al. teach that indexing documents according to name references can be useful for information retrieval for more knowledge intensive tasks such as database extraction (page 44).

As to claim 6, Ruch et al. do not teach the specificity calculating unit includes a database creating means extracting the person's name and a modification expression for each document from an existing document of a document database to calculate a specificity and for creating a reference specificity database registering specificity data having a set of an expression specifying the person, a type of the person's name or modification expression and a specificity.

However, Mani et al. teach using a knowledge source, where the knowledge source has multiple hypotheses with different confidence measures for each surrounding expression for the extracted name, (page 48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ruch et al. with the methods of Mani et al. since Ruch et al. teach database extraction, and Mani et al. teach that indexing

documents according to name references can be useful for information retrieval for more knowledge intensive tasks such as database extraction (page 44).

As to claims 7 and 20, Ruch et al. do not teach the specificity calculating unit includes a database creating means extracting the person's name and a modification expression for each document from an existing document of a document database to calculate a specificity and for creating a reference specificity database registering specificity data having a set of an expression specifying the person, a type of the person's a name or a modification expression of a specificity.

However, Mani et al. teach a knowledge source having multiple hypotheses with different confidence measures, where knowledge source is able to extract information source document and use the information for pattern matching, (page 48-49).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ruch et al. with the methods of Mani et al. since Ruch et al. teach database extraction, and Mani et al. teach that indexing documents according to name references can be useful for information retrieval for more knowledge intensive tasks such as database extraction (page 44).

12. Claims 12, 13, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruch et al. as applied to claims 1 and 14 above, and further in view of Botham, Jr. et al. (6,785,812).

As to claims 12 and 27, Ruch et al. do not teach wherein the anonymity setting processing unit encrypts an expression specifying the person extracted from the input document to carry out rewriting with the anonymity expression.

However, Botham Jr. et al. teach encrypting identity information with a document to make the document anonymous, (col. 1, lines 50-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ruch et al. with the methods of Botham Jr. et al. to create a security system, only allowing verified users to access the personal identity information, as taught by Botham Jr. et al. (col. 1, lines 40-45)

As to claims 13 and 28, Ruch et al. do not teach a decrypting indicating means decrypting and displaying an encrypted expression when someone reads a rewritten document with an anonymity expression through encrypting by the anonymity setting processing unit.

However, Botham Jr. et al. teach decrypting a message, allowing verified users to see the personal identification information, (col. 2, lines 10-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ruch et al. with the methods of Botham Jr. et al. to create a security system, only allowing verified users to access the personal identity information, as taught by Botham Jr. et al. (col. 1, lines 40-45).

***Allowable Subject Matter***

13. The following is a statement of reasons for the indication of allowable subject matter:

As to claims 5 and 18, Ruch et al. do not teach nor fairly suggest a person specifying tree extracting means extracting a tree structure specifying the person as a person modification expression based on a person specifying tree extracting rule for the tree structure obtained by the parsing unit, nor a tree structure specificity calculating means calculating a specificity of the person specifying tree thus extracted based on statistical information.

As to claims 11 and 26, Ruch et al. do not teach nor fairly suggest the anonymity setting processing unit replaces an expression specifying the person extracted from the input document to a low specificity expression having a specificity which is equal to or smaller than a threshold to be used for rewriting the anonymity expression.

As to claim 19, Ruch et al. do not teach nor fairly suggest the specificity calculating step takes a weight average of a specificity obtained by calculation of an expression which specifies the person extracted from the input document with a specificity registered in a reference specificity database registering specificity data having a set of an expression specifying the person created based on an existing

document, a type of the person's name or a modification expression and a specificity, and normalizes the weight average.

As to claim 21, Ruch et al. do not teach nor fairly suggest an anonymity setting indicating step of setting and changing a threshold to be used at the anonymity setting processing step.

As to claim 22, Ruch et al. do not teach nor fairly suggest the anonymity setting method retains, in a threshold database, a threshold used in an anonymity setting processing for each processing document and sets a last threshold as a default during the anonymity setting processing of a new input document.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas E. Shortledge whose telephone number is (571)272-7612. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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12/21/05

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PRIMARY EXAMINER